

STIC Search Report

Biotech-Chem Library

STIC Database Tracking Number: 157111

TO: Rei-Tsang Shiao
Location: 5a10 / 5c18
Thursday, June 23, 2005
Art Unit: 1626
Phone: 571-272-0707
Serial Number: 10 / 786612

From: Jan Delaval
Location: Biotech-Chem Library
Remsen 1a51
Phone: 571-272-2504
jan.delaval@uspto.gov

Search Notes

=> fil reg
 FILE 'REGISTRY' ENTERED AT 14:38:29 ON 23 JUN 2005
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Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 22 JUN 2005 HIGHEST RN 852803-45-3
 DICTIONARY FILE UPDATES: 22 JUN 2005 HIGHEST RN 852803-45-3

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 18, 2005

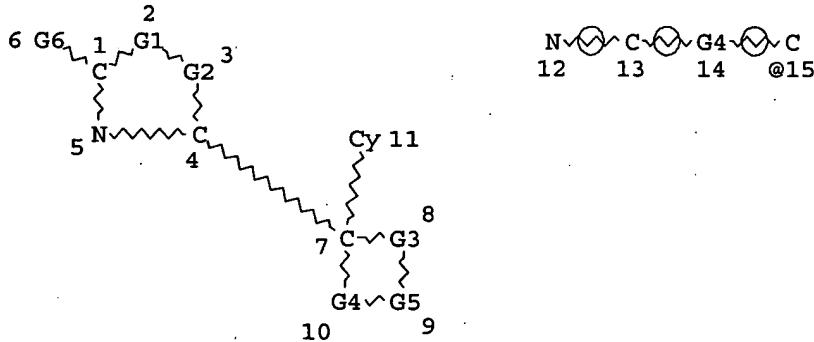
Please note that search-term pricing does apply when conducting SmartSELECT searches.

 *
 * The CA roles and document type information have been removed from *
 * the IDE default display format and the ED field has been added, *
 * effective March 20, 2005. A new display format, IDERL, is now *
 * available and contains the CA role and document type information. *
 *

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:
<http://www.cas.org/ONLINE/DBSS/registryss.html>

=> d sta que 135
 L11 STR



N~C~~G4~~C
 16 17 18 @19 20 21 22 @23

VAR G1=O/S
 VAR G2=N/C
 REP G3=(1-3) C
 REP G4=(0-3) C

VAR G5=C/O/N

VAR G6=23/19/15

NODE ATTRIBUTES:

NSPEC IS RC AT 20

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 23

STEREO ATTRIBUTES: NONE

L15 714630 SEA FILE=REGISTRY ABB=ON PLU=ON (NOCNC OR NSCNC OR NCOC2 OR NCSC2)/ES AND NR>=3

L31 192136 SEA FILE=REGISTRY ABB=ON PLU=ON (C3 OR C4 OR C5 OR C7 OR C8 OR NC2 OR NC3 OR NC4 OR NC5 OR NC6 OR NC7 OR OC2 OR OC3 OR OC4 OR OC5 OR OC6 OR OC7)/ES AND L15

L32 31576 SEA FILE=REGISTRY ABB=ON PLU=ON 46.150.1/RID AND L15

L33 216571 SEA FILE=REGISTRY ABB=ON PLU=ON L31 OR L32

L35 16 SEA FILE=REGISTRY SUB=L33 SSS FUL L11

100.0% PROCESSED 168683 ITERATIONS

16 ANSWERS

SEARCH TIME: 00.00.04

=> d ide can tot l35

L35 ANSWER 1 OF 16 REGISTRY COPYRIGHT 2005 ACS on STN

RN 473707-09-4 REGISTRY

ED Entered STN: 15 Nov 2002

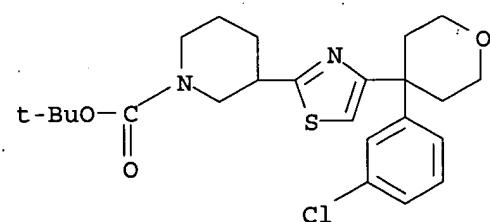
CN 1-Piperidinecarboxylic acid, 3-[4-[4-(3-chlorophenyl)tetrahydro-2H-pyran-4-yl]-2-thiazolyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

FS 3D CONCORD

MF C24 H31 Cl N2 O3 S

SR CA

LC STN Files: CA, CAPLUS, USPAT2, USPATFULL



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)

1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

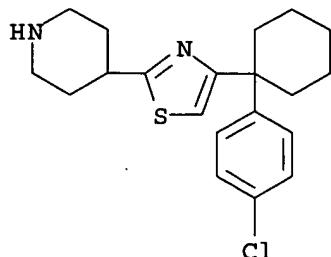
REFERENCE 1: 137:325411

L35 ANSWER 2 OF 16 REGISTRY COPYRIGHT 2005 ACS on STN

RN 473707-04-9 REGISTRY

ED Entered STN: 15 Nov 2002

CN Piperidine, 4-[4-[1-(4-chlorophenyl)cyclohexyl]-2-thiazolyl]- (9CI) (CA
 INDEX NAME)
 FS 3D CONCORD
 MF C20 H25 Cl N2 S
 SR CA
 LC STN Files: CA, CAPLUS, USPAT2, USPATFULL

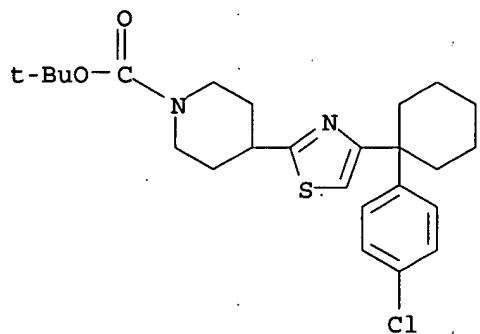


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 137:325411

L35 ANSWER 3 OF 16 REGISTRY COPYRIGHT 2005 ACS on STN
 RN 473707-03-8 REGISTRY
 ED Entered STN: 15 Nov 2002
 CN 1-Piperidinecarboxylic acid, 4-[4-[1-(4-chlorophenyl)cyclohexyl]-2-thiazolyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)
 FS 3D CONCORD
 MF C25 H33 Cl N2 O2 S
 SR CA
 LC STN Files: CA, CAPLUS, USPAT2, USPATFULL

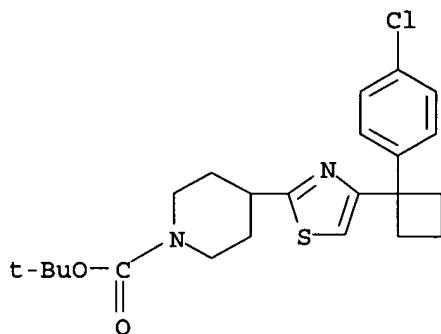


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 137:325411

L35 ANSWER 4 OF 16 REGISTRY COPYRIGHT 2005 ACS on STN
 RN 473707-01-6 REGISTRY
 ED Entered STN: 15 Nov 2002
 CN 1-Piperidinecarboxylic acid, 4-[4-[1-(4-chlorophenyl)cyclobutyl]-2-thiazolyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)
 FS 3D CONCORD
 MF C23 H29 Cl N2 O2 S
 SR CA
 LC STN Files: CA, CAPLUS, USPAT2, USPATFULL

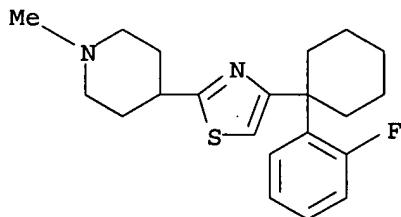


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 137:325411

L35 ANSWER 5 OF 16 REGISTRY COPYRIGHT 2005 ACS on STN
 RN 473706-47-7 REGISTRY
 ED Entered STN: 15 Nov 2002
 CN Piperidine, 4-[4-[1-(2-fluorophenyl)cyclohexyl]-2-thiazolyl]-1-methyl- (9CI) (CA INDEX NAME)
 FS 3D CONCORD
 MF C21 H27 F N2 S
 SR CA
 LC STN Files: CA, CAPLUS, USPAT2, USPATFULL

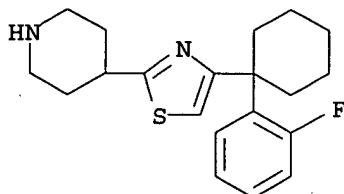


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 137:325411

L35 ANSWER 6 OF 16 REGISTRY COPYRIGHT 2005 ACS on STN
 RN 473706-46-6 REGISTRY
 ED Entered STN: 15 Nov 2002
 CN Piperidine, 4-[4-[1-(2-fluorophenyl)cyclohexyl]-2-thiazolyl]- (9CI) (CA INDEX NAME)
 FS 3D CONCORD
 MF C20 H25 F N2 S
 SR CA
 LC STN Files: CA, CAPLUS, USPAT2, USPATFULL

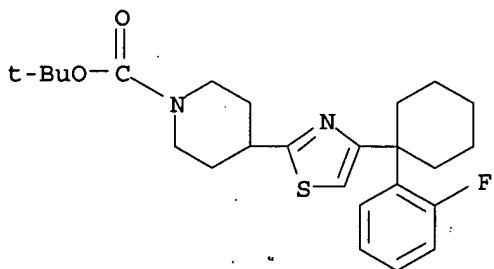


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 137:325411

L35 ANSWER 7 OF 16 REGISTRY COPYRIGHT 2005 ACS on STN
 RN 473706-45-5 REGISTRY
 ED Entered STN: 15 Nov 2002
 CN 1-Piperidinecarboxylic acid, 4-[4-[1-(2-fluorophenyl)cyclohexyl]-2-thiazolyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)
 FS 3D CONCORD
 MF C25 H33 F N2 O2 S
 SR CA
 LC STN Files: CA, CAPLUS, USPAT2, USPATFULL

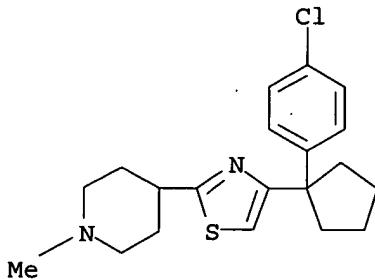


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
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REFERENCE 1: 137:325411

L35 ANSWER 8 OF 16 REGISTRY COPYRIGHT 2005 ACS on STN
 RN 473706-44-4 REGISTRY
 ED Entered STN: 15 Nov 2002
 CN Piperidine, 4-[4-[1-(4-chlorophenyl)cyclopentyl]-2-thiazolyl]-1-methyl-
 (9CI) (CA INDEX NAME)
 FS 3D CONCORD
 MF C20 H25 Cl N2 S
 SR CA
 LC STN Files: CA, CAPLUS, USPAT2, USPATFULL

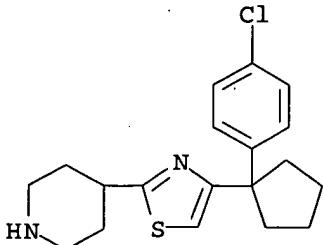


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 137:325411

L35 ANSWER 9 OF 16 REGISTRY COPYRIGHT 2005 ACS on STN
 RN 473706-43-3 REGISTRY
 ED Entered STN: 15 Nov 2002
 CN Piperidine, 4-[4-[1-(4-chlorophenyl)cyclopentyl]-2-thiazolyl]- (9CI) (CA
 INDEX NAME)
 FS 3D CONCORD
 MF C19 H23 Cl N2 S
 SR CA
 LC STN Files: CA, CAPLUS, USPAT2, USPATFULL

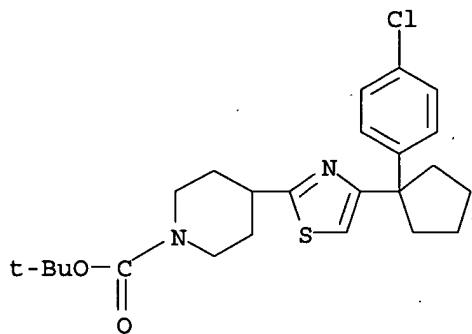


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 137:325411

L35 ANSWER 10 OF 16 REGISTRY COPYRIGHT 2005 ACS on STN
 RN 473706-42-2 REGISTRY
 ED Entered STN: 15 Nov 2002
 CN 1-Piperidinecarboxylic acid, 4-[4-[1-(4-chlorophenyl)cyclopentyl]-2-thiazolyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)
 FS 3D CONCORD
 MF C24 H31 Cl N2 O2 S
 SR CA
 LC STN Files: CA, CAPLUS, USPAT2, USPATFULL

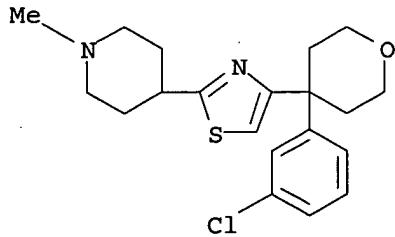


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 137:325411

L35 ANSWER 11 OF 16 REGISTRY COPYRIGHT 2005 ACS on STN
 RN 473706-30-8 REGISTRY
 ED Entered STN: 15 Nov 2002
 CN Piperidine, 4-[4-[4-(3-chlorophenyl)tetrahydro-2H-pyran-4-yl]-2-thiazolyl]-1-methyl- (9CI) (CA INDEX NAME)
 FS 3D CONCORD
 MF C20 H25 Cl N2 O S
 SR CA
 LC STN Files: CA, CAPLUS, USPAT2, USPATFULL

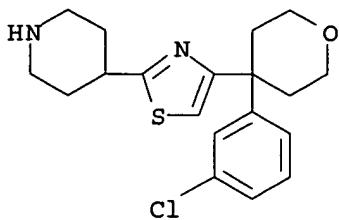


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 137:325411

L35 ANSWER 12 OF 16 REGISTRY COPYRIGHT 2005 ACS on STN
 RN 473706-29-5 REGISTRY
 ED Entered STN: 15 Nov 2002
 CN Piperidine, 4-[4-[4-(3-chlorophenyl)tetrahydro-2H-pyran-4-yl]-2-thiazolyl]-
 (9CI) (CA INDEX NAME)
 FS 3D CONCORD
 MF C19 H23 Cl N2 O S
 SR CA
 LC STN Files: CA, CAPLUS, USPAT2, USPATFULL

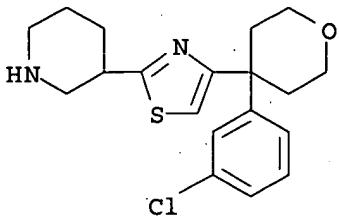


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 137:325411

L35 ANSWER 13 OF 16 REGISTRY COPYRIGHT 2005 ACS on STN
 RN 473706-04-6 REGISTRY
 ED Entered STN: 15 Nov 2002
 CN Piperidine, 3-[4-[4-(3-chlorophenyl)tetrahydro-2H-pyran-4-yl]-2-thiazolyl]-
 (9CI) (CA INDEX NAME)
 FS 3D CONCORD
 MF C19 H23 Cl N2 O S
 SR CA
 LC STN Files: CA, CAPLUS, USPAT2, USPATFULL

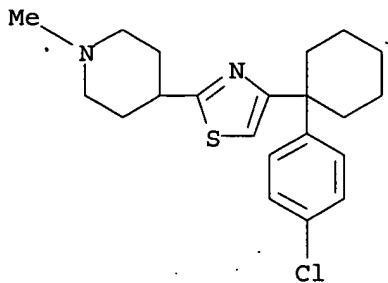


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 137:325411

L35 ANSWER 14 OF 16 REGISTRY COPYRIGHT 2005 ACS on STN
 RN 473706-01-3 REGISTRY
 ED Entered STN: 15 Nov 2002
 CN Piperidine, 4-[4-[1-(4-chlorophenyl)cyclohexyl]-2-thiazolyl]-1-methyl-
 (9CI) (CA INDEX NAME)
 FS 3D CONCORD
 MF C21 H27 Cl N2 S
 SR CA
 LC STN Files: CA, CAPLUS, USPAT2, USPATFULL

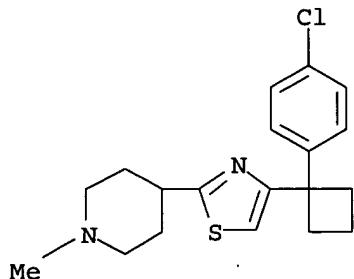


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
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REFERENCE 1: 137:325411

L35 ANSWER 15 OF 16 REGISTRY COPYRIGHT 2005 ACS on STN
 RN 473705-97-4 REGISTRY
 ED Entered STN: 15 Nov 2002
 CN Piperidine, 4-[4-[1-(4-chlorophenyl)cyclobutyl]-2-thiazolyl]-1-methyl-
 (9CI) (CA INDEX NAME)
 FS 3D CONCORD
 MF C19 H23 Cl N2 S
 SR CA
 LC STN Files: CA, CAPLUS, USPAT2, USPATFULL

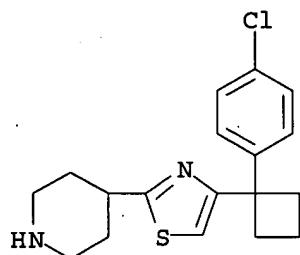


PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 137:325411

L35 ANSWER 16 OF 16 REGISTRY COPYRIGHT 2005 ACS on STN
 RN 473705-96-3 REGISTRY
 ED Entered STN: 15 Nov 2002
 CN Piperidine, 4-[4-[1-(4-chlorophenyl)cyclobutyl]-2-thiazolyl]- (9CI) (CA
 INDEX NAME)
 FS 3D CONCORD
 MF C18 H21 Cl N2 S
 SR CA
 LC STN Files: CA, CAPLUS, USPAT2, USPATFULL



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

1 REFERENCES IN FILE CA (1907 TO DATE)
 1 REFERENCES IN FILE CAPLUS (1907 TO DATE)

REFERENCE 1: 137:325411

=> d his

(FILE 'HOME' ENTERED AT 13:53:49 ON 23 JUN 2005)
 SET COST OFF

FILE 'HCAPLUS' ENTERED AT 13:53:59 ON 23 JUN 2005

L1	1 S (US20040235913 OR US20030105071 OR US6699866)/PN OR (US2004-7
	E CUNY G/AU
L2	91 S E3,E4,E9
	E HAUSKE J/AU
L3	79 S E4-E8
	E HERRERNAN M/AU
	E HEFFERNAN M/AU
L4	48 S E3,E6,E16-E18
	E HOLLAND J/AU
L5	118 S E3,E19-E21
	E HOLLAND JO/AU
L6	22 S E4-E6
	E PERSONS P/AU
L7	32 S E3-E7
	E RADEKE H/AU
L8	28 S E3-E8
	E SEPRACOR/PA,CS

L9 396 S SEPRACOR?/PA,CS
 SEL RN L1

FILE 'REGISTRY' ENTERED AT 13:58:10 ON 23 JUN 2005

L10 191 S E1-E191
 L11 STR
 L12 0 S L11
 L13 STR L11
 L14 0 S L13
 L15 714630 S (NOCNC OR NSCNC OR NCOC2 OR NCSC2)/ES AND NR>=3
 L16 STR L13
 L17 0 S L16 SAM SUB=L15
 L18 SCR 2039 OR 2043 OR 2050 OR 2049 OR 2053 OR 2052 OR 2051 OR 205
 L19 0 S L16 NOT L18 SAM SUB=L15
 L20 SCR 1993 AND 1840
 L21 0 S L16 AND L20 NOT L18 SAM SUB=L15
 L22 STR L16
 L23 0 S L22 AND L20 NOT L18 SAM SUB=L15
 L24 93 S L10 AND L15
 L25 STR L22
 L26 0 S L25 AND L20 NOT L18 SAM SUB=L15
 L27 STR L25
 L28 0 S L27 AND L20 NOT L18 CSS SAM SUB=L15
 L29 STR L27
 L30 0 S L29 AND L20 NOT L18 CSS SAM SUB=L15
 L31 192136 S (C3 OR C4 OR C5 OR C7 OR C8 OR NC2 OR NC3 OR NC4 OR NC5 OR NC
 L32 31576 S 46.150.1/RID AND L15
 L33 216571 S L31 OR L32
 L34 0 S L11 SAM SUB=L33
 L35 16 S L11 FUL SUB=L33
 L36 77 S L24 NOT L35
 SAV L35 SHIAO786/A

FILE 'HCAOLD' ENTERED AT 14:37:42 ON 23 JUN 2005

L37 0 S L35

FILE 'HCAPLUS' ENTERED AT 14:37:44 ON 23 JUN 2005

L38 1 S L35
 L39 1 S L35 AND L1-L9

FILE 'USPATFULL, USPAT2' ENTERED AT 14:38:03 ON 23 JUN 2005

L40 3 S L35

FILE 'REGISTRY' ENTERED AT 14:38:29 ON 23 JUN 2005

=> fil hcaplus
 FILE 'HCAPLUS' ENTERED AT 14:38:40 ON 23 JUN 2005
 USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.
 PLEASE SEE "HELP USAGETERMS" FOR DETAILS.
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FILE COVERS 1907 - 23 Jun 2005 VOL 142 ISS 26
 FILE LAST UPDATED: 22 Jun 2005 (20050622/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d 139 all hitstr

L39 ANSWER 1 OF 1 HCAPLUS COPYRIGHT 2005 ACS on STN
 AN 2002:814288 HCAPLUS
 DN 137:325411
 ED Entered STN: 25 Oct 2002
 TI Thiazole and other heterocyclic ligands for mammalian dopamine, muscarinic and serotonin receptors and transporters
 IN Cuny, Gregory D.; Hauske, James R.; Heffernan, Michele L.; Holland, Joanne M.; Persons, Paul E.; Radeke, Heike
 PA Sepracor, Inc., USA
 SO PCT Int. Appl., 153 pp.
 CODEN: PIXXD2
 DT Patent
 LA English
 IC ICM C12N
 CC 28-7 (Heterocyclic Compounds (More Than One Hetero Atom))
 Section cross-reference(s): 1

FAN.CNT 1

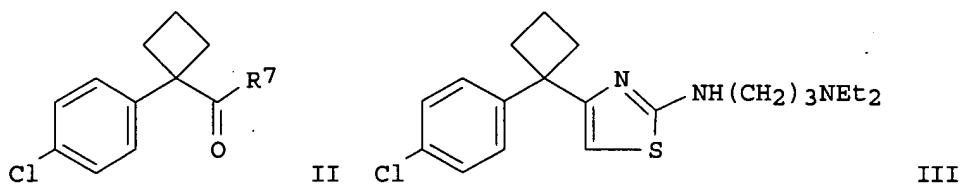
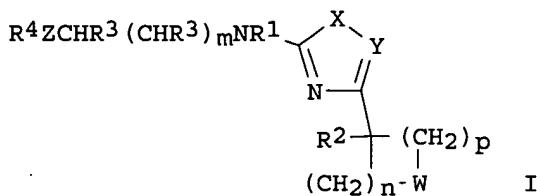
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2002083863	A2	20021024	WO 2002-US11692	20020412 <--
	WO 2002083863	A3	20040212		
		W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZM, ZW			
		RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG			
	US 2003105071	A1	20030605	US 2002-123089	20020412 <--
	US 6699866	B2	20040302		
	US 2004235913	A1	20041125	US 2004-786612	20040225 <--
PRAI	US 2001-284159P	P	20010417	<--	
	US 2001-313648P	P	20010820	<--	
	US 2002-123089	A3	20020412	<--	

CLASS

PATENT NO.	CLASS	PATENT FAMILY CLASSIFICATION CODES
WO 2002083863	ICM	C12N
WO 2002083863	ECLA	C07D271/06D6; C07D277/42; C07D413/12+271+207; C07D417/04+277B+211; C07D417/04+277B+243; C07D417/04+277B+207; C07D417/04+309+277B; C07D417/04+333+277B; C07D417/06+333+277B; C07D417/12+277B+207; C07D417/14+277B+211+211; C07D417/14+309+277B+211; C07D417/14+333+309+277B <--

US 2003105071	NCL	514/236.800; 514/254.020; 514/326.000; 514/370.000; 544/133.000; 544/137.000; 544/369.000; 546/209.000; 548/190.000
	ECLA	C07D271/06D6; C07D277/42; C07D413/12+271+207; C07D417/04+277B+207; C07D417/04+277B+243; C07D417/04+277B+211; C07D417/04+309+277B; C07D417/04+333+277B; C07D417/06+333+277B; C07D417/12+277B+207; C07D417/14+277B+211+211; C07D417/14+309+277B+211; C07D417/14+333+309+277B
US 2004235913	NCL	514/365.000
	ECLA	C07D271/06D6; C07D277/42; C07D413/12+271+207; C07D417/04+277B+207; C07D417/04+277B+211; C07D417/04+277B+243; C07D417/04+309+277B; C07D417/04+333+277B; C07D417/06+333+277B; C07D417/12+277B+207; C07D417/14+277B+211+211; C07D417/14+309+277B+211; C07D417/14+333+309+277B

OS MARPAT 137:325411
GI



AB Title compds. I [W = CH₂, O, NR; X = O, S; Y = CR₅, N; Z = NR₆, O; R, R₁, R₄ = H, alkyl; R₂ = aryl, heteroaryl; R₃ = H, alkyl, alkoxy, alkylamino; R₅ = H, alkyl, halogen; R₆ = H, alkyl, aryl, aralkyl; R₁R₃, R₁R₄, R₃R₄, R₃R₆, R₄R₆ = bond; m, n = 0-3; p = 1-3] and their stereoisomers were prepared for use as ligands for various mammalian cellular receptors, including G-protein coupled receptors, such as mammalian dopamine, muscarinic or serotonin receptors or transporters. These compds. will find use in the treatment of ailments, such as addiction, anxiety, depression, sexual dysfunction, hypertension, migraine, Alzheimer's disease, obesity, emesis, psychosis, analgesia, schizophrenia, Parkinson's disease, restless leg syndrome, sleeping disorders, attention deficit hyperactivity disorder, irritable bowel syndrome, premature ejaculation, menstrual dysphoria syndrome, urinary incontinence, inflammatory pain, neuropathic pain, Lesche-Nyhane disease, Wilson's disease, Tourette's syndrome, psychiatric disorders, stroke, senile dementia, peptic ulcers, pulmonary obstruction disorders, and asthma. Thus, the acid II [R₇ = OH] was converted to II [R₇ = CH₂Cl] and treated with Et₂N(CH₂)₃NHCSNH₂ to give the thiazole III. III had IC₅₀ for 5-HT_{2c} receptor binding <100 nM and d₃ receptor binding <1000 nM.

ST aminoalkylaminothiazolylcycloalkane prep dopamine muscarinic serotonin receptor binding

IT Dopamine receptors
RL: BSU (Biological study, unclassified); BIOL (Biological study)
(D3; thiazole and other heterocyclic ligands for mammalian dopamine, muscarinic and serotonin receptors and transporters)

IT Brain, disease
(Gilles de la Tourette syndrome; thiazole and other heterocyclic ligands for mammalian dopamine, muscarinic and serotonin receptors and transporters)

IT Mental disorder
(attention deficit hyperactivity disorder; thiazole and other heterocyclic ligands for mammalian dopamine, muscarinic and serotonin receptors and transporters)

IT Mental disorder
(dementia; thiazole and other heterocyclic ligands for mammalian dopamine, muscarinic and serotonin receptors and transporters)

IT Mental disorder
(depression; thiazole and other heterocyclic ligands for mammalian dopamine, muscarinic and serotonin receptors and transporters)

IT Sexual behavior
(disorder, premature ejaculation; thiazole and other heterocyclic ligands for mammalian dopamine, muscarinic and serotonin receptors and transporters)

IT Sexual behavior
(disorder; thiazole and other heterocyclic ligands for mammalian dopamine, muscarinic and serotonin receptors and transporters)

IT Menstrual disorder
(dysphoria; thiazole and other heterocyclic ligands for mammalian dopamine, muscarinic and serotonin receptors and transporters)

IT Bladder, disease
(incontinence; thiazole and other heterocyclic ligands for mammalian dopamine, muscarinic and serotonin receptors and transporters)

IT Intestine, disease
(irritable bowel syndrome; thiazole and other heterocyclic ligands for mammalian dopamine, muscarinic and serotonin receptors and transporters)

IT Headache
(migraine; thiazole and other heterocyclic ligands for mammalian dopamine, muscarinic and serotonin receptors and transporters)

IT Lung, disease
(obstructive; thiazole and other heterocyclic ligands for mammalian dopamine, muscarinic and serotonin receptors and transporters)

IT Antiulcer agents
Ulcer
(peptic; thiazole and other heterocyclic ligands for mammalian dopamine, muscarinic and serotonin receptors and transporters)

IT Mental disorder
(psychosis; thiazole and other heterocyclic ligands for mammalian dopamine, muscarinic and serotonin receptors and transporters)

IT Brain, disease
(stroke; thiazole and other heterocyclic ligands for mammalian dopamine, muscarinic and serotonin receptors and transporters)

IT Alzheimer's disease
Analgesia
Analgesics
Anti-Alzheimer's agents
Anti-inflammatory agents
Antiasthmatics
Antidepressants
Antiemetics
Antihypertensives

Antimigraine agents
 Antiobesity agents
 Antiparkinsonian agents
 Antipsychotics
 Anxiety
 Anxiolytics
 Asthma
 Biological transport
 Drug dependence
 Human
 Hypertension
 Inflammation
 Obesity
 Pain
 Parkinson's disease
 Schizophrenia
 Sleep disorders
 Vomiting
 Wilson's disease
 (thiazole and other heterocyclic ligands for mammalian dopamine,
 muscarinic and serotonin receptors and transporters)
 IT G proteins (guanine nucleotide-binding proteins)
 Muscarinic receptors
 RL: BSU (Biological study, unclassified); BIOL (Biological study)
 (thiazole and other heterocyclic ligands for mammalian dopamine,
 muscarinic and serotonin receptors and transporters)
 IT Ligands
 RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU
 (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES
 (Uses)
 (thiazole and other heterocyclic ligands for mammalian dopamine,
 muscarinic and serotonin receptors and transporters)
 IT 5-HT receptors
 RL: BSU (Biological study, unclassified); BIOL (Biological study)
 (type 5-HT2C; thiazole and other heterocyclic ligands for mammalian
 dopamine, muscarinic and serotonin receptors and transporters)
 IT Digestive tract, disease
 (ulcer, peptic; thiazole and other heterocyclic ligands for mammalian
 dopamine, muscarinic and serotonin receptors and transporters)
 IT 473706-03-5P 473706-49-9P 473706-68-2P
 RL: BSU (Biological study, unclassified); PAC (Pharmacological activity);
 SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological
 study); PREP (Preparation); USES (Uses)
 (thiazole and other heterocyclic ligands for mammalian dopamine,
 muscarinic and serotonin receptors and transporters)
 IT 473705-86-1P
 RL: BSU (Biological study, unclassified); SPN (Synthetic preparation);
 BIOL (Biological study); PREP (Preparation)
 (thiazole and other heterocyclic ligands for mammalian dopamine,
 muscarinic and serotonin receptors and transporters)
 IT 473705-85-0P 473705-96-3P 473706-29-5P 473706-77-3P
 473706-84-2P
 RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic
 preparation); THU (Therapeutic use); BIOL (Biological study); PREP
 (Preparation); RACT (Reactant or reagent); USES (Uses)
 (thiazole and other heterocyclic ligands for mammalian dopamine,
 muscarinic and serotonin receptors and transporters)
 IT 473705-87-2P 473705-88-3P 473705-89-4P 473705-90-7P 473705-91-8P
 473705-92-9P 473705-93-0P 473705-94-1P 473705-95-2P
 473705-97-4P 473705-98-5P 473705-99-6P 473706-00-2P

473706-01-3P 473706-02-4P **473706-04-6P** 473706-05-7P
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473706-62-6P 473706-63-7P **473706-64-8P** 473706-65-9P **473706-66-0P**
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473706-81-9P 473706-83-1P **473706-85-3P** 473706-86-4P **473706-87-5P**
473706-90-0P 473706-92-2P **473706-93-3P** 473706-94-4P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(thiazole and other heterocyclic ligands for mammalian dopamine, muscarinic and serotonin receptors and transporters)

IT 93-17-4, 3,4-Dimethoxyphenylacetonitrile 104-47-2, 4-Methoxyphenylacetonitrile 109-01-3, N-Methylpiperazine 140-29-4, Phenylacetonitrile 140-53-4, 4-Chlorophenylacetonitrile 459-22-3, 4-Fluorophenylacetonitrile 1529-41-5, 3-Chlorophenylacetonitrile 2019-34-3, 3-(4-Chlorophenyl)propanoic acid 2338-75-2, 4-Trifluoromethylphenylacetonitrile 3874-54-2 4138-26-5, Nipecotamide 4318-37-0, 1-Methyl-2,3,4,5,6,7-hexahydro-1H-1,4-diazepine 4318-42-7, N-Isopropylpiperazine 4897-50-1, 4-Piperidinopiperidine 5414-19-7, Bis(2-bromoethyl) ether 18471-40-4 19924-43-7, 3-Methoxyphenylacetonitrile 23799-62-4 23799-65-7 33860-28-5 39546-32-2, Isonipecotamide 49561-96-8, 4-Trifluoromethoxyphenylacetonitrile 50921-39-6, 1-(4-Chlorophenyl)cyclobutanecarboxylic acid 51387-90-7 57260-71-6, N-tert.-Butoxycarbonylpiperazine 58880-37-8 64021-83-6 69478-75-7 80789-69-1 98275-66-2 99799-61-8 106795-66-8 111538-46-6 122641-10-5 156801-47-7 172478-00-1 206761-87-7 214262-96-1 214263-00-0 473701-03-0 473706-97-7 473707-13-0 473707-14-1

RL: RCT (Reactant); RACT (Reactant or reagent)

(thiazole and other heterocyclic ligands for mammalian dopamine, muscarinic and serotonin receptors and transporters)

IT 109-64-8P, 1,3-Dibromopropane 1202-81-9P 3648-57-5P 3648-58-6P 3648-74-6P 3648-78-0P 28049-61-8P 61909-89-5P 73161-98-5P 84523-62-6P 91419-48-6P 91419-49-7P 127489-83-2P 156801-61-5P 179420-73-6P 182491-21-0P 196811-66-2P 214834-18-1P 274682-80-3P 404589-70-4P 473706-06-8P 473706-07-9P 473706-08-0P 473706-10-4P 473706-11-5P 473706-12-6P 473706-14-8P 473706-16-0P 473706-17-1P 473706-18-2P 473706-20-6P 473706-22-8P 473706-23-9P 473706-24-0P 473706-26-2P 473706-27-3P 473706-31-9P 473706-33-1P 473706-35-3P 473706-38-6P 473706-40-0P **473706-42-2P** **473706-43-3P** **473706-45-5P** **473706-46-6P** 473706-48-8P 473706-76-2P 473706-82-0P 473706-88-6P 473706-89-7P 473706-91-1P 473706-95-5P 473706-96-6P 473706-98-8P 473706-99-9P 473707-00-5P **473707-01-6P** 473707-02-7P **473707-03-8P** **473707-04-9P** 473707-05-0P 473707-06-1P 473707-07-2P 473707-08-3P **473707-09-4P** 473707-10-7P 473707-11-8P, [1,4'-Bipiperidine]-1'-carbothioamide 473707-12-9P 473707-15-2P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(thiazole and other heterocyclic ligands for mammalian dopamine, muscarinic and serotonin receptors and transporters)

IT 473706-79-5P

RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

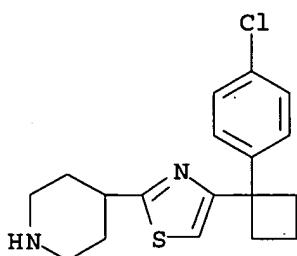
(thiazole and other heterocyclic ligands for mammalian dopamine, muscarinic and serotonin receptors and transporters)

IT 473705-96-3P 473706-29-5P

RL: PAC (Pharmacological activity); RCT (Reactant); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); RACT (Reactant or reagent); USES (Uses)
(thiazole and other heterocyclic ligands for mammalian dopamine, muscarinic and serotonin receptors and transporters)

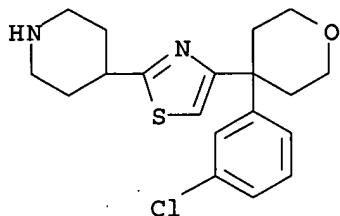
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CN Piperidine, 4-[4-[1-(4-chlorophenyl)cyclobutyl]-2-thiazolyl]- (9CI) (CA INDEX NAME)



RN 473706-29-5 HCAPLUS

CN Piperidine, 4-[4-[4-(3-chlorophenyl)tetrahydro-2H-pyran-4-yl]-2-thiazolyl]- (9CI) (CA INDEX NAME)



IT 473705-97-4P 473706-01-3P 473706-04-6P

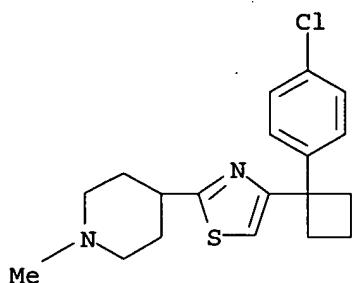
473706-30-8P 473706-44-4P 473706-47-7P

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

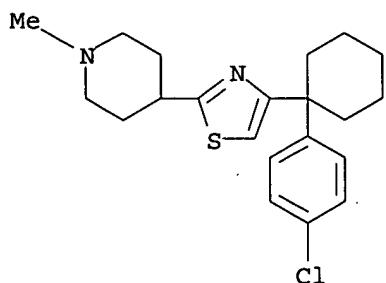
(thiazole and other heterocyclic ligands for mammalian dopamine, muscarinic and serotonin receptors and transporters)

RN 473705-97-4 HCAPLUS

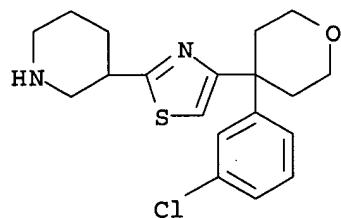
CN Piperidine, 4-[4-[1-(4-chlorophenyl)cyclobutyl]-2-thiazolyl]-1-methyl- (9CI) (CA INDEX NAME)



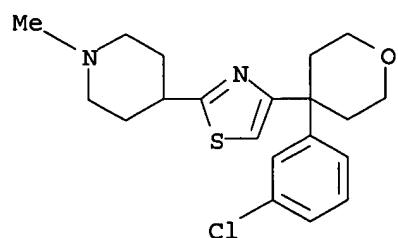
RN 473706-01-3 HCAPLUS
 CN Piperidine, 4-[4-[(4-chlorophenyl)cyclohexyl]-2-thiazolyl]-1-methyl-
 (9CI) (CA INDEX NAME)



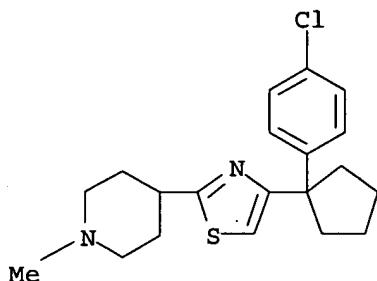
RN 473706-04-6 HCAPLUS
 CN Piperidine, 3-[4-[(4-(3-chlorophenyl)tetrahydro-2H-pyran-4-yl)-2-thiazolyl]-
 (9CI) (CA INDEX NAME)



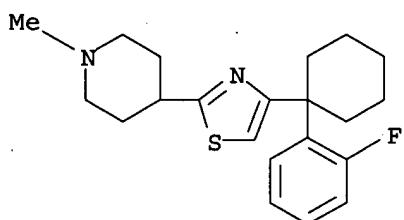
RN 473706-30-8 HCAPLUS
 CN Piperidine, 4-[4-[(4-(3-chlorophenyl)tetrahydro-2H-pyran-4-yl)-2-thiazolyl]-
 1-methyl- (9CI) (CA INDEX NAME)



RN 473706-44-4 HCAPLUS

CN Piperidine, 4-[4-[1-(4-chlorophenyl)cyclopentyl]-2-thiazolyl]-1-methyl-
(9CI) (CA INDEX NAME)

RN 473706-47-7 HCAPLUS

CN Piperidine, 4-[4-[1-(2-fluorophenyl)cyclohexyl]-2-thiazolyl]-1-methyl-
(9CI) (CA INDEX NAME)

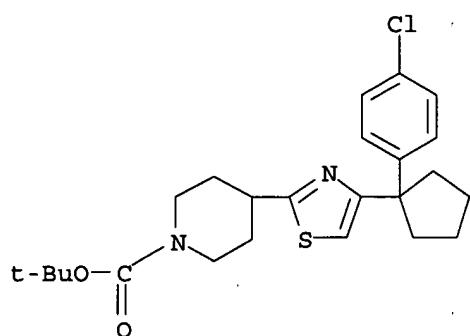
IT 473706-42-2P 473706-43-3P 473706-45-5P

473706-46-6P 473707-01-6P 473707-03-8P

473707-04-9P 473707-09-4P

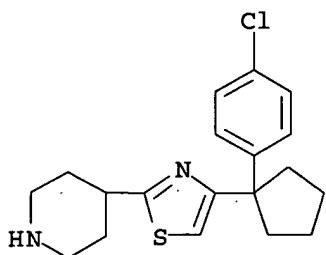
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT
(Reactant or reagent)(thiazole and other heterocyclic ligands for mammalian dopamine,
muscarinic and serotonin receptors and transporters)

RN 473706-42-2 HCAPLUS

CN 1-Piperidinecarboxylic acid, 4-[4-[1-(4-chlorophenyl)cyclopentyl]-2-
thiazolyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)

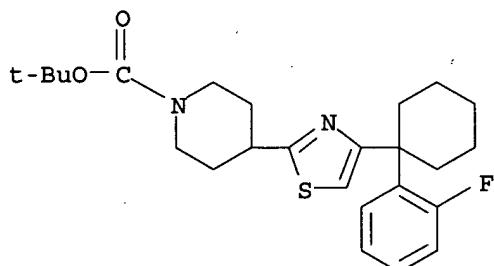
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CN Piperidine, 4-[4-[1-(4-chlorophenyl)cyclopentyl]-2-thiazolyl]- (9CI) (CA INDEX NAME)



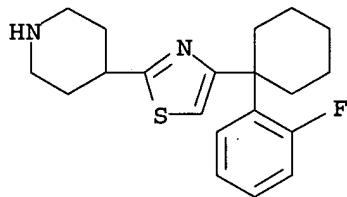
RN 473706-45-5 HCAPLUS

CN 1-Piperidinecarboxylic acid, 4-[4-[1-(2-fluorophenyl)cyclohexyl]-2-thiazolyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)



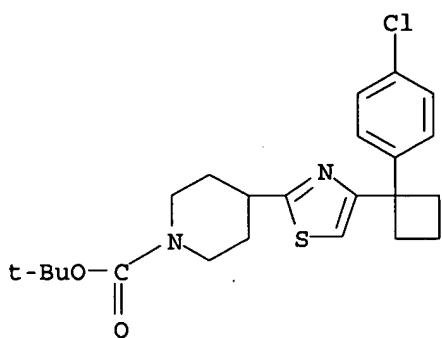
RN 473706-46-6 HCAPLUS

CN Piperidine, 4-[4-[1-(2-fluorophenyl)cyclohexyl]-2-thiazolyl]- (9CI) (CA INDEX NAME)



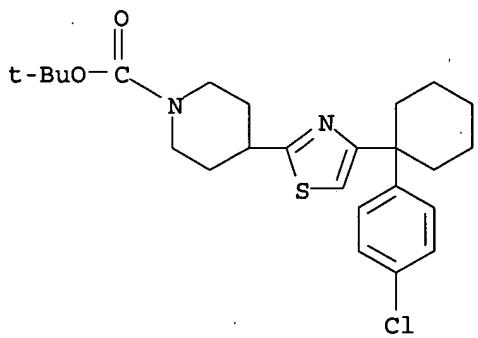
RN 473707-01-6 HCAPLUS

CN 1-Piperidinecarboxylic acid, 4-[4-[1-(4-chlorophenyl)cyclobutyl]-2-thiazolyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)



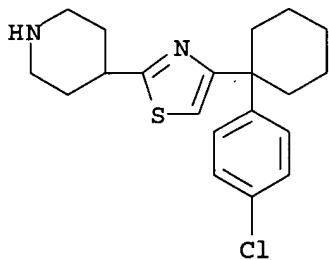
RN 473707-03-8 HCPLUS

CN 1-Piperidinecarboxylic acid, 4-[4-[1-(4-chlorophenyl)cyclohexyl]-2-thiazolyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)



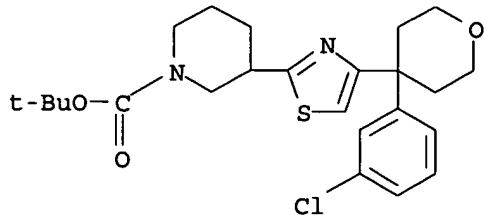
RN 473707-04-9 HCPLUS

CN Piperidine, 4-[4-[1-(4-chlorophenyl)cyclohexyl]-2-thiazolyl]- (9CI) (CA INDEX NAME)



RN 473707-09-4 HCPLUS

CN 1-Piperidinecarboxylic acid, 3-[4-[4-(3-chlorophenyl)tetrahydro-2H-pyran-4-yl]-2-thiazolyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)



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FILE 'USPATFULL' ENTERED AT 14:38:48 ON 23 JUN 2005
CA INDEXING COPYRIGHT (C) 2005 AMERICAN CHEMICAL SOCIETY (ACS)

FILE 'USPAT2' ENTERED AT 14:38:48 ON 23 JUN 2005
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L40 ANSWER 1 OF 3 USPATFULL on STN

AN 2004:300044 USPATFULL

TI Thiazole and other heterocyclic ligands for mammalian dopamine,
muscarinic and serotonin receptors and transporters, and methods of use
thereof

IN Cuny, Gregory D., Somerville, MA, UNITED STATES
Hauske, James R., Concord, MA, UNITED STATES
Heffernan, Michele L.R., Worcester, MA, UNITED STATES
Holland, Joanne M., Brookline, MA, UNITED STATES
Persons, Paul E., Westborough, MA, UNITED STATES
Radeke, Heike, South Grafton, MA, UNITED STATES

PI US 2004235913 A1 20041125

AI US 2004-786612 A1 20040225 (10)

RLI Division of Ser. No. US 2002-123089, filed on 12 Apr 2002, GRANTED, Pat.
No. US 6699866

PRAI US 2001-284159P 20010417 (60)
US 2001-313648P 20010820 (60)

DT Utility

FS APPLICATION

LREP FOLEY HOAG, LLP, PATENT GROUP, WORLD TRADE CENTER WEST, 155 SEAPORT
BLVD, BOSTON, MA, 02110

CLMN Number of Claims: 106

ECL Exemplary Claim: 1

DRWN No Drawings

LN.CNT 5343

11/8

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB One aspect of the present invention relates to novel heterocyclic compounds. A second aspect of the present invention relates to the use of the novel heterocyclic compounds as ligands for various mammalian cellular receptors, including G-protein coupled receptors. A third aspect of the present invention relates to the use of the novel heterocyclic compounds as ligands for mammalian dopamine, muscarinic or serotonin receptors or transporters. Another aspect of the present invention relates to the use of the novel heterocyclic compounds as ligands for mammalian dopamine, muscarinic or serotonin receptors. The compounds of the present invention will also find use in the treatment of numerous ailments, conditions and diseases which afflict mammals, including but not limited to addiction, anxiety, depression, sexual

dysfunction, hypertension, migraine, Alzheimer's disease, obesity, emesis, psychosis, analgesia, schizophrenia, Parkinson's disease, restless leg syndrome, sleeping disorders, attention deficit hyperactivity disorder, irritable bowel syndrome, premature ejaculation, menstrual dysphoria syndrome, urinary incontinence, inflammatory pain, neuropathic pain, Lesche-Nyhane disease, Wilson's disease, Tourette's syndrome, psychiatric disorders, stroke, senile dementia, peptic ulcers, pulmonary obstruction disorders, and asthma.

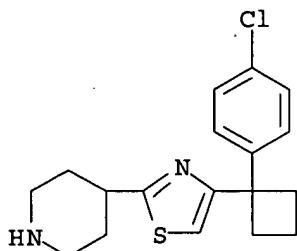
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 473705-96-3P 473706-29-5P

(thiazole and other heterocyclic ligands for mammalian dopamine, muscarinic and serotonin receptors and transporters)

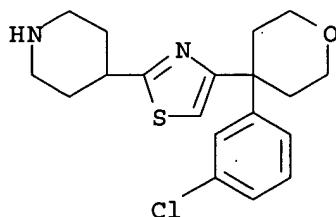
RN 473705-96-3 USPATFULL

CN Piperidine, 4-[4-[1-(4-chlorophenyl)cyclobutyl]-2-thiazolyl]- (9CI) (CA INDEX NAME)



RN 473706-29-5 USPATFULL

CN Piperidine, 4-[4-[4-(3-chlorophenyl)tetrahydro-2H-pyran-4-yl]-2-thiazolyl]- (9CI) (CA INDEX NAME)



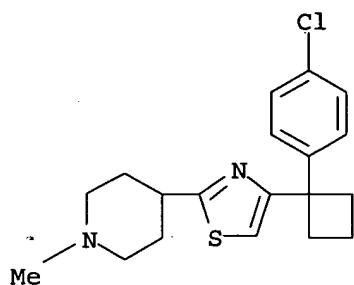
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473706-30-8P 473706-44-4P 473706-47-7P

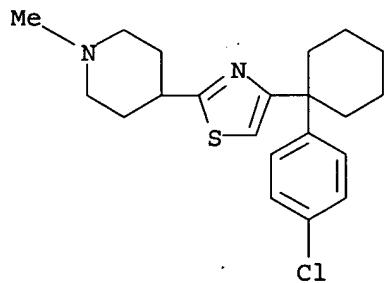
(thiazole and other heterocyclic ligands for mammalian dopamine, muscarinic and serotonin receptors and transporters)

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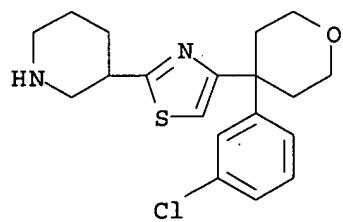
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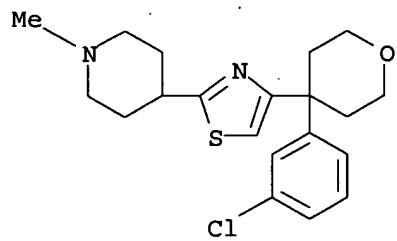
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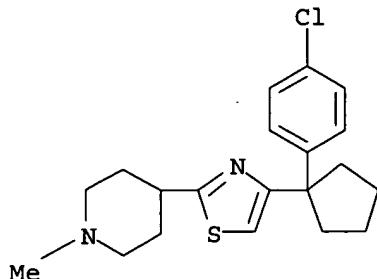
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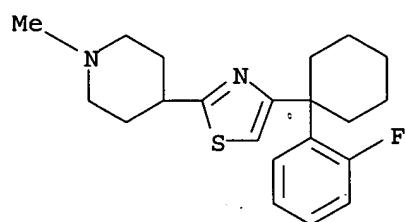
RN 473706-30-8 USPATFULL
 CN Piperidine, 4-[4-[(4-(3-chlorophenyl)tetrahydro-2H-pyran-4-yl)-2-thiazolyl]- 1-methyl- (9CI) (CA INDEX NAME)



RN 473706-44-4 USPATFULL
 CN Piperidine, 4-[4-[1-(4-chlorophenyl)cyclopentyl]-2-thiazolyl]-1-methyl-
 (9CI) (CA INDEX NAME)

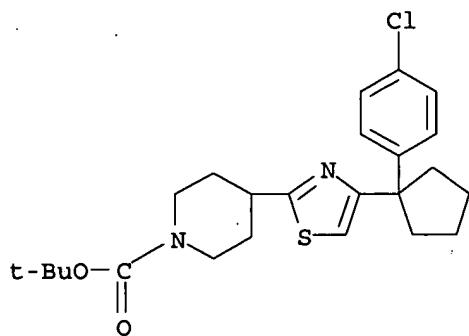


RN 473706-47-7 USPATFULL
 CN Piperidine, 4-[4-[1-(2-fluorophenyl)cyclohexyl]-2-thiazolyl]-1-methyl-
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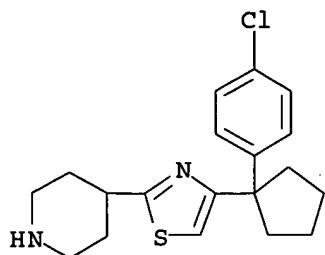


IT 473706-42-2P 473706-43-3P 473706-45-5P
 473706-46-6P 473707-01-6P 473707-03-8P
 473707-04-9P 473707-09-4P
 (thiazole and other heterocyclic ligands for mammalian dopamine,
 muscarinic and serotonin receptors and transporters)

RN 473706-42-2 USPATFULL
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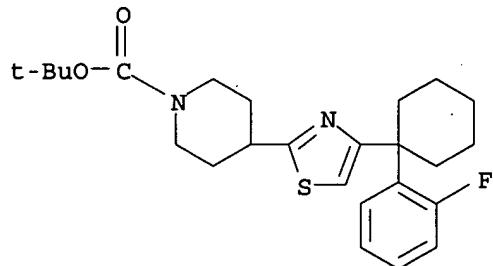


RN 473706-43-3 USPATFULL
 CN Piperidine, 4-[4-[1-(4-chlorophenyl)cyclopentyl]-2-thiazolyl]- (9CI) (CA INDEX NAME)



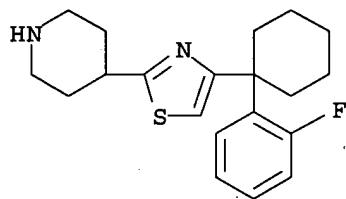
RN 473706-45-5 USPATFULL

CN 1-Piperidinecarboxylic acid, 4-[4-[1-(2-fluorophenyl)cyclohexyl]-2-thiazolyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)



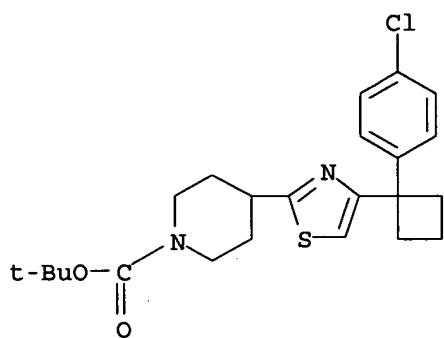
RN 473706-46-6 USPATFULL

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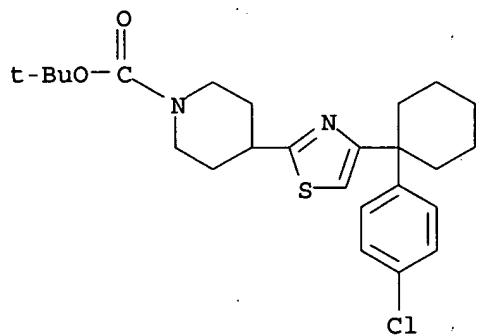
RN 473707-01-6 USPATFULL

CN 1-Piperidinecarboxylic acid, 4-[4-[1-(4-chlorophenyl)cyclobutyl]-2-thiazolyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)



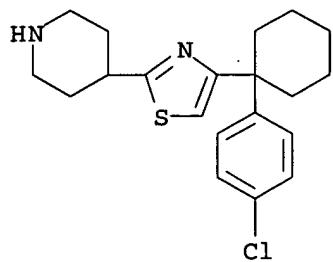
RN 473707-03-8 USPATFULL

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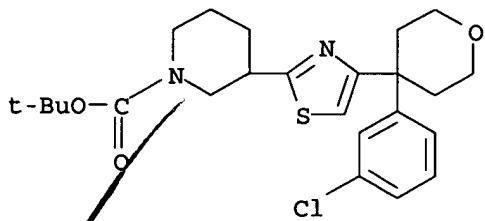
RN 473707-04-9 USPATFULL

CN Piperidine, 4-[4-[1-(4-chlorophenyl)cyclohexyl]-2-thiazolyl]- (9CI) (CA INDEX NAME)



RN 473707-09-4 USPATFULL

CN 1-Piperidinecarboxylic acid, 3-[4-[4-(3-chlorophenyl)tetrahydro-2H-pyran-4-yl]-2-thiazolyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)



L40 ANSWER 2 OF 3 USPATFULL on STN

AN 2003:153403 USPATFULL

TI Thiazole and other heterocyclic ligands for mammalian dopamine, muscarinic and serotonin receptors and transporters, and methods of use thereof

IN Cuny, Gregory D., Somerville, MA, UNITED STATES
 Hauske, James R., Concord, MA, UNITED STATES
 Heffernan, Michele L.R., Worcester, MA, UNITED STATES
 Holland, Joanne M., Brookline, MA, UNITED STATES
 Persons, Paul E., Westborough, MA, UNITED STATES
 Radeke, Heike, Grafton, MA, UNITED STATES

PI US 2003105071 A1 20030605

US 6699866 B2 20040302

AI US 2002-123089 A1 20020412 (10)

PRAI US 2001-284159P 20010417 (60)

US 2001-313648P 20010820 (60)

DT Utility

FS APPLICATION

LREP FOLEY HOAG, LLP, PATENT GROUP, WORLD TRADE CENTER WEST, 155 SEAPORT BLVD, BOSTON, MA, 02110

CLMN Number of Claims: 106

ECL Exemplary Claim: 1

DRWN No Drawings

LN.CNT 5332

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB One aspect of the present invention relates to novel heterocyclic compounds. A second aspect of the present invention relates to the use of the novel heterocyclic compounds as ligands for various mammalian cellular receptors, including G-protein coupled receptors. A third aspect of the present invention relates to the use of the novel heterocyclic compounds as ligands for mammalian dopamine, muscarinic or serotonin receptors or transporters. Another aspect of the present invention relates to the use of the novel heterocyclic compounds as ligands for mammalian dopamine, muscarinic or serotonin receptors. The compounds of the present invention will also find use in the treatment of numerous ailments, conditions and diseases which afflict mammals, including but not limited to addiction, anxiety, depression, sexual dysfunction, hypertension, migraine, Alzheimer's disease, obesity, emesis, psychosis, analgesia, schizophrenia, Parkinson's disease, restless leg syndrome, sleeping disorders, attention deficit hyperactivity disorder, irritable bowel syndrome, premature ejaculation, menstrual dysphoria syndrome, urinary incontinence, inflammatory pain, neuropathic pain, Lesche-Nyhane disease, Wilson's disease, Tourette's syndrome, psychiatric disorders, stroke, senile dementia, peptic ulcers, pulmonary obstruction disorders, and asthma.

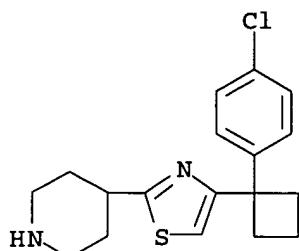
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 473705-96-3P 473706-29-5P

(thiazole and other heterocyclic ligands for mammalian dopamine,
muscarinic and serotonin receptors and transporters)

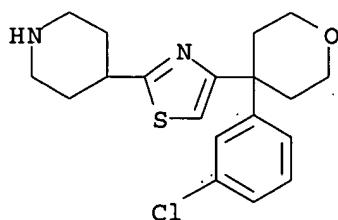
RN 473705-96-3 USPATFULL

CN Piperidine, 4-[4-[1-(4-chlorophenyl)cyclobutyl]-2-thiazolyl]- (9CI) (CA INDEX NAME)



RN 473706-29-5 USPATFULL

CN Piperidine, 4-[4-[4-(3-chlorophenyl)tetrahydro-2H-pyran-4-yl]-2-thiazolyl]- (9CI) (CA INDEX NAME)

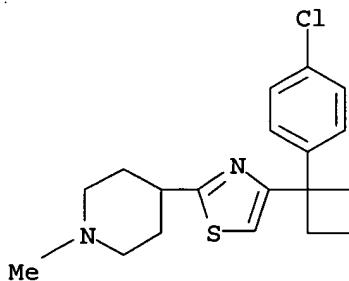


IT 473705-97-4P 473706-01-3P 473706-04-6P
473706-30-8P 473706-44-4P 473706-47-7P

(thiazole and other heterocyclic ligands for mammalian dopamine,
muscarinic and serotonin receptors and transporters)

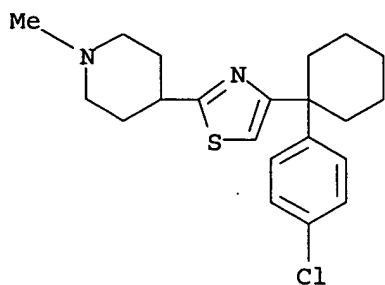
RN 473705-97-4 USPATFULL

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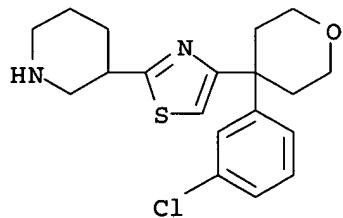


RN 473706-01-3 USPATFULL

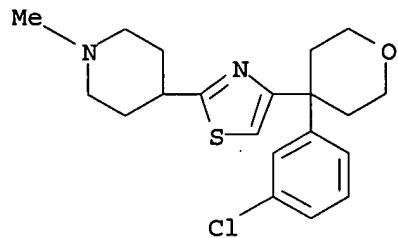
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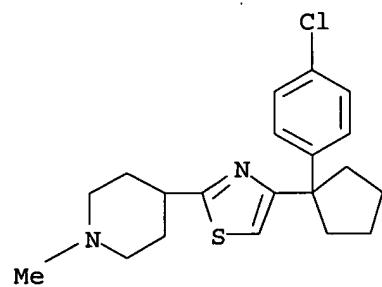
RN 473706-04-6 USPATFULL

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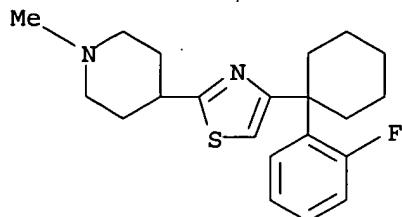
RN 473706-30-8 USPATFULL

CN Piperidine, 4-[4-[4-(3-chlorophenyl)tetrahydro-2H-pyran-4-yl]-2-thiazolyl]-
1-methyl- (9CI) (CA INDEX NAME)

RN 473706-44-4 USPATFULL

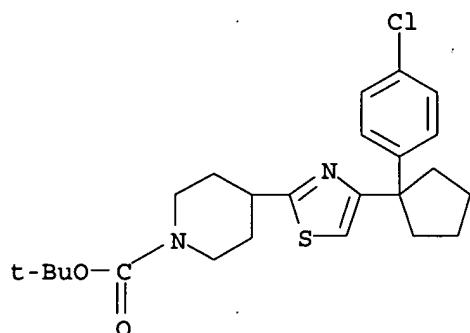
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(9CI) (CA INDEX NAME)

RN 473706-47-7 USPATFULL

CN Piperidine, 4-[4-[1-(2-fluorophenyl)cyclohexyl]-2-thiazolyl]-1-methyl-
(9CI) (CA INDEX NAME)IT 473706-42-2P 473706-43-3P 473706-45-5P
473706-46-6P 473707-01-6P 473707-03-8P
473707-04-9P 473707-09-4P(thiazole and other heterocyclic ligands for mammalian dopamine,
muscarinic and serotonin receptors and transporters)

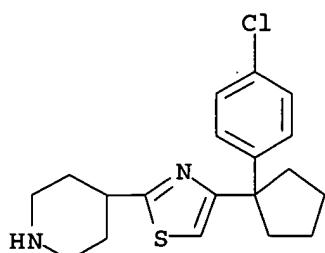
RN 473706-42-2 USPATFULL

CN 1-Piperidinecarboxylic acid, 4-[4-[1-(4-chlorophenyl)cyclopentyl]-2-thiazolyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)



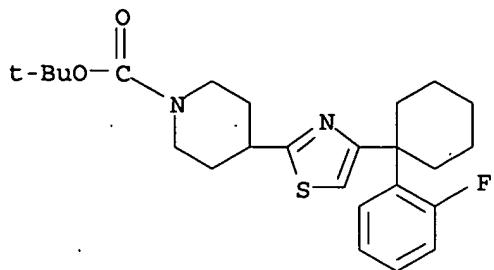
RN 473706-43-3 USPATFULL

CN Piperidine, 4-[4-[1-(4-chlorophenyl)cyclopentyl]-2-thiazolyl]- (9CI) (CA INDEX NAME)



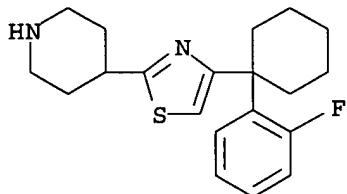
RN 473706-45-5 USPATFULL

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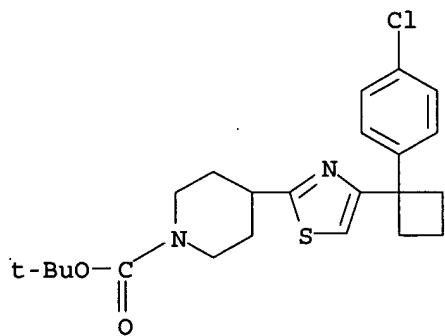
RN 473706-46-6 USPATFULL

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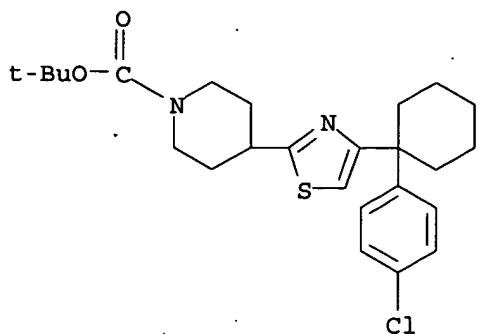
RN 473707-01-6 USPATFULL

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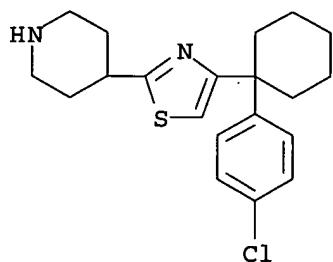
RN 473707-03-8 USPATFULL

CN 1-Piperidinecarboxylic acid, 4-[4-[1-(4-chlorophenyl)cyclohexyl]-2-thiazolyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)



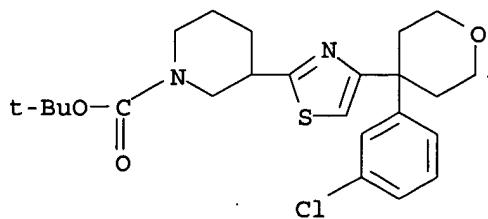
RN 473707-04-9 USPATFULL

CN Piperidine, 4-[4-[1-(4-chlorophenyl)cyclohexyl]-2-thiazolyl]- (9CI) (CA INDEX NAME)



RN 473707-09-4 USPATFULL

CN 1-Piperidinecarboxylic acid, 3-[4-[4-(3-chlorophenyl)tetrahydro-2H-pyran-4-yl]-2-thiazolyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)



L40 ANSWER 3 OF 3 USPAT2 on STN

AN 2003:153403 USPAT2

TI Thiazole and other heterocyclic ligands for mammalian dopamine, muscarinic and serotonin receptors and transporters, and methods of use thereof

IN Cuny, Gregory D., Somerville, MA, United States
Hauske, James R., Concord, MA, United States

Heffernan, Michele L. R., Worcester, MA, United States

Holland, Joanne M., Brookline, MA, United States

Persons, Paul E., Westborough, MA, United States

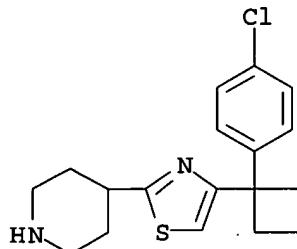
Radeke, Heike, South Grafton, MA, United States

PA Sepracor Inc., Marlborough, MA, United States (U.S. corporation)
PI US 6699866 B2 20040302

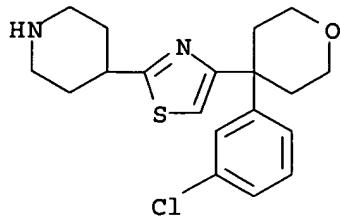
AI US 2002-123089 20020412 (10)
 PRAI US 2001-284159P 20010417 (60)
 US 2001-313648P 20010820 (60)
 DT Utility
 FS GRANTED
 EXNAM Primary Examiner: Rotman, Alan L.; Assistant Examiner: Shiao, Roei
 LREP Gordon, Dana M., Foley Hoag LLP
 CLMN Number of Claims: 23
 ECL Exemplary Claim: 1
 DRWN 0 Drawing Figure(s); 0 Drawing Page(s)
 LN.CNT 4972
 CAS INDEXING IS AVAILABLE FOR THIS PATENT.
 AB One aspect of the present invention relates to novel heterocyclic compounds. A second aspect of the present invention relates to the use of the novel heterocyclic compounds as ligands for various mammalian cellular receptors, including G-protein coupled receptors. A third aspect of the present invention relates to the use of the novel heterocyclic compounds as ligands for mammalian dopamine, muscarinic or serotonin receptors or transporters. Another aspect of the present invention relates to the use of the novel heterocyclic compounds as ligands for mammalian dopamine, muscarinic or serotonin receptors. The compounds of the present invention will also find use in the treatment of numerous ailments, conditions and diseases which afflict mammals, including but not limited to addiction, anxiety, depression, sexual dysfunction, hypertension, migraine, Alzheimer's disease, obesity, emesis, psychosis, analgesia, schizophrenia, Parkinson's disease, restless leg syndrome, sleeping disorders, attention deficit hyperactivity disorder, irritable bowel syndrome, premature ejaculation, menstrual dysphoria syndrome, urinary incontinence, inflammatory pain, neuropathic pain, Lesche-Nyhane disease, Wilson's disease, Tourette's syndrome, psychiatric disorders, stroke, senile dementia, peptic ulcers, pulmonary obstruction disorders, and asthma.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 473705-96-3P 473706-29-5P
 (thiazole and other heterocyclic ligands for mammalian dopamine, muscarinic and serotonin receptors and transporters)
 RN 473705-96-3 USPAT2
 CN Piperidine, 4-[4-[1-(4-chlorophenyl)cyclobutyl]-2-thiazolyl]- (9CI) (CA INDEX NAME)



RN 473706-29-5 USPAT2
 CN Piperidine, 4-[4-[4-(3-chlorophenyl)tetrahydro-2H-pyran-4-yl]-2-thiazolyl]- (9CI) (CA INDEX NAME)

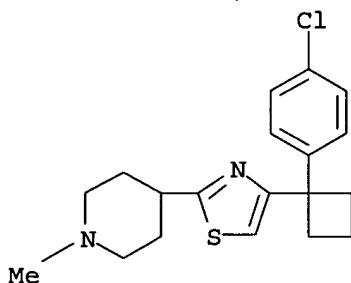


IT 473705-97-4P 473706-01-3P 473706-04-6P
 473706-30-8P 473706-44-4P 473706-47-7P

(thiazole and other heterocyclic ligands for mammalian dopamine,
 muscarinic and serotonin receptors and transporters)

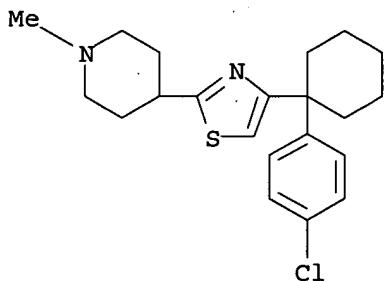
RN 473705-97-4 USPAT2

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 (9CI) (CA INDEX NAME)



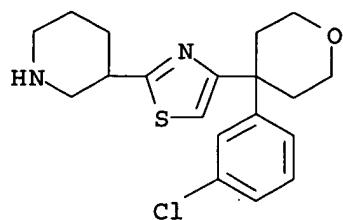
RN 473706-01-3 USPAT2

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 (9CI) (CA INDEX NAME)



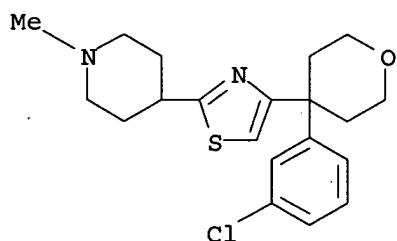
RN 473706-04-6 USPAT2

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 (9CI) (CA INDEX NAME)



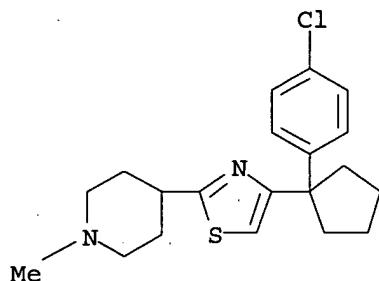
RN 473706-30-8 USPAT2

CN Piperidine, 4-[4-[4-(3-chlorophenyl)tetrahydro-2H-pyran-4-yl]-2-thiazolyl]-1-methyl- (9CI) (CA INDEX NAME)



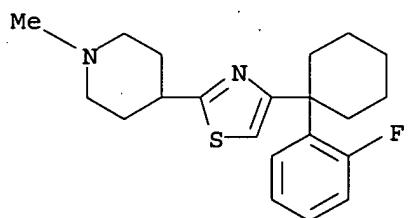
RN 473706-44-4 USPAT2

CN Piperidine, 4-[4-[1-(4-chlorophenyl)cyclopentyl]-2-thiazolyl]-1-methyl- (9CI) (CA INDEX NAME)



RN 473706-47-7 USPAT2

CN Piperidine, 4-[4-[1-(2-fluorophenyl)cyclohexyl]-2-thiazolyl]-1-methyl- (9CI) (CA INDEX NAME)



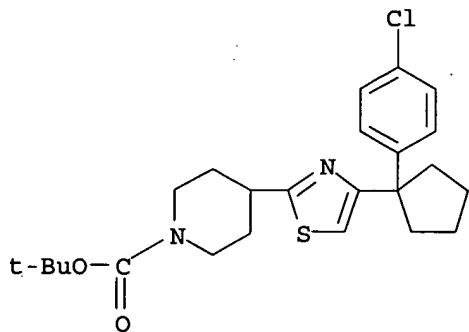
IT 473706-42-2P 473706-43-3P 473706-45-5P

473706-46-6P 473707-01-6P 473707-03-8P
 473707-04-9P 473707-09-4P

(thiazole and other heterocyclic ligands for mammalian dopamine,
 muscarinic and serotonin receptors and transporters)

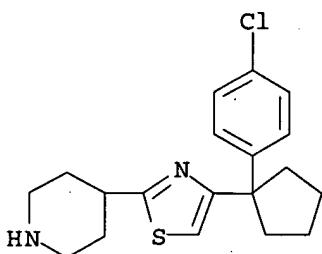
RN 473706-42-2 USPAT2

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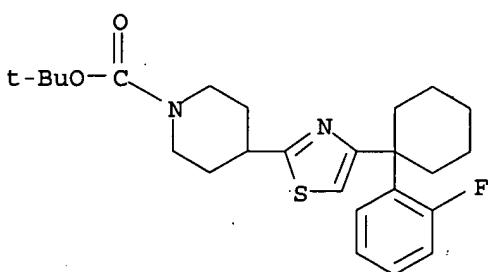
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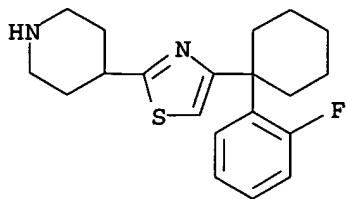
RN 473706-45-5 USPAT2

CN 1-Piperidinecarboxylic acid, 4-[4-[1-(2-fluorophenyl)cyclohexyl]-2-thiazolyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)



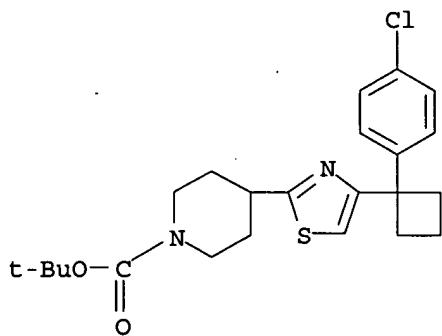
RN 473706-46-6 USPAT2

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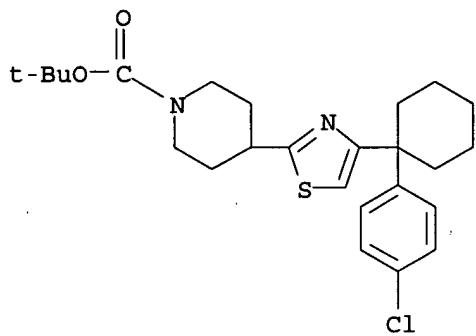
RN 473707-01-6 USPAT2

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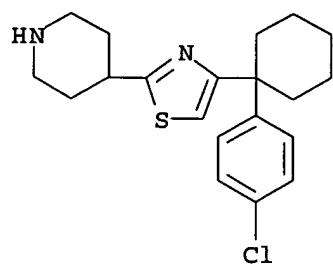
RN 473707-03-8 USPAT2

CN 1-Piperidinecarboxylic acid, 4-[4-[(1-(4-chlorophenyl)cyclohexyl)thiazolyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)



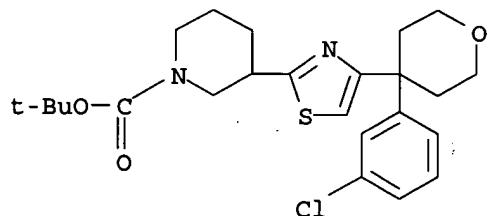
RN 473707-04-9 USPAT2

CN Piperidine, 4-[4-[(1-(4-chlorophenyl)cyclohexyl)thiazolyl]- (9CI) (CA INDEX NAME)



RN 473707-09-4 USPAT2

CN 1-Piperidinecarboxylic acid, 3-[4-[4-(3-chlorophenyl)tetrahydro-2H-pyran-4-yl]-2-thiazolyl]-, 1,1-dimethylethyl ester (9CI) (CA INDEX NAME)



⇒